

ABSTRACT

In a first aspect, an automatic door opener is provided that includes (1) a platform adapted to support a substrate carrier; (2) a door opening mechanism adapted to open a door of the substrate carrier while the substrate carrier is supported by the platform; and (3) a tunnel. The tunnel is adapted to extend from an opening in a clean room wall toward the platform and at least partially surround the platform. The tunnel is further adapted to direct a flow of air from the clean room wall toward the platform and out of the tunnel. Numerous other aspects are provided.